Ownership matrix	**RPP-27195**

1.0 PURPOSE AND SCOPE
(5.1.1)

This standard describes the Tank Operations Contractor (TOC) general requirements as well as organizational roles and responsibilities for implementing DOE-0360, "Hanford Site Confined Space Procedure." DOE-0360 describes the process used by Hanford Site prime contractors and subcontractors performing confined space activities. In addition, this standard provides specific means for implementing portions of DOE-0360. This standard supplements but does not replace or supersede DOE-0360.

2.0 IMPLEMENTATION

This standard is effective on the date shown in the header.

3.0 STANDARD

3.1 Roles and Responsibilities

This section provides a WRPS specific set of roles and responsibilities in the implementation of DOE-0360. Prior to performing confined space activities, all requirements applicable to the scope of work, as described in DOE-0360, shall be reviewed to ensure that appropriate requirements are implemented.

Within the Confined Space Program anyone who is trained and signed off as a Qualified Person via course #354044, is also deemed to meet the requirements of a Competent Person.

3.1.1 Facility Manager

- Ensures that work places within their jurisdiction are evaluated to determine if there are any confined spaces. If the space is not accessible (requiring special tool or equipment to access), then the space does not need evaluated or posted.

- Ensures each confined space under their jurisdiction and/or ownership is documented on the WRPS centralized confined space list.

- Ensures any confined space that no longer meets the requirements of a confined space is removed from the centralized confined space list.

- Ensures all confined space evaluations are conducted by a WRPS IS/IH employee who has been trained and signed off as a Competent Person as defined in Appendix B of DOE-0360 and documented via course #354043.

3.1.2 Project/Construction Manager

- The Facility Manager shall be notified to have any space created by a modification, construction, or maintenance activities evaluated by a WRPS IS/IH employee who has been signed of as a Confined Space Competent Person as defined in Appendix B of DOE-0360. The Competent Person as defined in Appendix B of DOE-0360 shall have completed course #354043.

- The Facility Manager shall be notified when any new or temporary confined space needs to be added to the WRPS centralized confined space list.

- The Facility Manager shall be notified when any temporary or existing confined space needs to be removed from the WRPS centralized confined space list.

3.1.3 Industrial Safety/Industrial Hygiene (IS/IH) Professionals

To complete any part of the Confined Space Entry Permit or Confined Space Hazard Identification (CSHID) form, the IS/IH professional must be trained and qualified as a Confined Space Competent Person as defined in Appendix B of DOE-0360 and have completed the WRPS Competent Person course #354043.

- When no CSHID form exists or is an old revision, the IS/IH whose work evolution will be entering the confined space shall generate a new CSHID form that represents the static condition of the space. The evaluation of confined spaces on CSHID forms at this time is not the sole responsibility of the facility owner's IS/IH personnel.

- When a confined space is identified to be entered and the IS/IH determine that no CSHID form has been generated for the space, they shall check the centralized confined space inventory to obtain the CSHID number. If no number exists, they shall contact the Confined Space program SME or their designee to have the space added to the inventory and a CSHID number generated.

Multiple permits are NOT to be scanned together.

- A PDF version of each closed-out permit shall be emailed to ^WRPS Confined Space.

- A signed PDF version of each CSHID shall be emailed to ^WRPS Confined Space.

- Confined space hazard evaluations shall be performed and documented using the Hanford Confined Space Hazard Identification Form (A-6005-724).

- Non-entry retrieval shall be used whenever an authorized entrant enters a permit required confined space (PRCS). If it is determined that the non-entry retrieval system would increase the overall risk of entry, or would not contribute to the rescue of the entrant, another method shall be identified and documented on the permit.

- When any abnormal confined space event occurs, the Confined Space SME shall be contacted immediately.

- When using a non-entry retrieval system, the non-entry retrieval attendant shall complete the computer-based training (CBT) for the WRPS non-entry retrieval system via course #350675 "WRPS Confined Space Rescue Equipment Training."

  – The workers will take part in hands-on orientation with a field safety professional and upon request the confined space SME shall assist. This orientation shall be documented on a WRPS attendance roster (A-6003-211) with course #350675 referenced on the roster.

3.1.4 Industrial Hygienist

- Industrial Hygienist will determine and document the atmospheric testing requirements and reference the Industrial Hygiene Sampling Plan for confined space entries in Section 6 of the Confined Space Entry Permit.

- Each confined space that has access to the headspace of a tank will be considered to have an atmospheric hazard unless an Industrial Hygiene Exposure Assessment (IHEA) is conducted in accordance with Section 3.3 of this document and deems that no atmospheric hazard exists. The IHEA must be referenced on the CSHID form.

- Industrial Hygienist must also review and approve atmospheric testing records in accordance with TFC-ESHQ-IH-C-46.

3.1.5 Industrial Hygiene Technicians

- Atmospheric monitoring shall be conducted in accordance with the job specific Industrial Hygiene Sampling Plan (IHSP).

- The direct reading instrument (DRI) functional test data and the atmospheric monitoring results shall be recorded in Section 7 of the Hanford Confined Space Entry Permit (A-6005-717). The IHT will also sign both the "Field Check By" and "Monitored By" boxes at the bottom of Section 7.

- Under the Alternate Entry method of entering a PRCS, the IHT will document in Section 7 the results of "initial atmosphere testing" prior to forced air ventilation being turned on if applicable. The "pre-entry monitoring" after forced air is running will be documented in Section 3 as "normal."

- The initial atmospheric test results will be recorded in Section 3 of the Hanford Confined Space Entry Permit (A-6005-717). The IHT will sign the "Monitored By" box in Section 3 and check "Yes" or "No" in the "Were Pre-Entry monitoring results within prescribed limits" question box. If "No" is selected in Section 3, then document the existing conditions and contact the responsible IH for actions to take.

- Atmospheric monitoring will be entered into the Industrial Hygiene database, in accordance with TFC-ESHQ-IH-C-46.

3.1.6 Confined Space Entry Supervisor/Field Work Supervisor

- When performing non-permit confined space entries, the Field Work Supervisor Competent Person will evaluate the space to ensure it still aligns with the CSHID form

(A-6005-724). They then sign Section 5 of the CSHID form daily, just prior to the workers entering the non-permit space.

- All documents generated during performance of DOE-0360, Section 4.0 shall be managed in accordance with TFC-OPS-MAINT-C-01. These documents may include any of the following: Hanford Confined Space Hazard Identification Form (A-6005-724); Hanford Confined Space Entry Permit (A-6005-717); Hanford Confined Space Entry Log (A-6005-719); and Hanford PRCS Entry Notification – Hanford Fire Department (A-6005-718).

- When non-entry retrieval equipment is used, ensure that the workers assigned to operate the equipment completed course #350675, "WRPS Confined Space Rescue Equipment Training." This will include a hands-on orientation with the field safety professional.

3.1.7 Confined Space SME/Record Custodian

- Hanford Confined Space Hazard Identification forms shall be processed for each CSHID form submitted for posting on the confined space web page.

- Copies of canceled Confined Space Entry permits shall be maintained on the TOC Confined Space Website.

- All facility managers shall be supported in maintaining a centralized confined space inventory.

The annual review will cover all PRCS entries performed during the previous 12-month period. If no entry is performed during the 12-month period, no review is necessary.

- An annual review of the program will be conducted to ensure that employees participating in entry operations are protected from permit space hazards. Canceled permits shall be reviewed and the implementation process revised as necessary.

- "Administrator" access to process forms and program correspondence for the e-mail address ^WRPS Confined Space shall be maintained.

3.2 General Information

CSHID forms that include an IHEA to support the classification of the space shall be reviewed by safety program management to ensure consistent implementation.

In all non-permit spaces, permit downgrades, and alternate entries, an "entry" into the confined space occurs when the entire body crosses the plane.

- Tank farm atmospheric hazards can be mitigated (not eliminated) by exhaust or forced air ventilation. The adequacy of the tank farm ventilation to mitigate an atmospheric hazard needs to be evaluated on a case by case basis. Once mitigated the Alternate Entry method of the confined space program may be used. At no point may the Confined Space downgrade method be used when an atmospheric hazard is mitigated.

- The use of respiratory protection or any other PPE shall not be considered in the determination of whether a confined space has a hazardous atmosphere.

- The flow chart in Figure 1 shall be used to assist in understanding the requirements and confined space process as outlined in DOE-0360. Figure 1 also helps identify what parts of the confined space program can be conducted by sub-contractors.

- All accessible confined spaces are required to have been evaluated and posted.

  – Spaces identified and evaluated prior to the site-wide confined space program do not require completion of Form A-6005-724 until the space is re-evaluated or entered.

The temporary attachment of tools such as top hat or handrail to a confined space does not become part of the confined space. The confined space threshold does not change from the confined space's static condition location.

- When filling out Section 5 of the CSHID, if question 3 is "Yes" and a method is identified to eliminate the introduced hazard prior to workers entering the space, the space can remain non-permit. (This does not apply to atmospheric hazards.)

- When performing repeated/routine entries into non-permit confined spaces, the IS/IH professional will complete and sign Section 5 of the CSHID form. The form will be placed in the work package for use by the supervisor.

  – The supervisor will make a copy of the signed form and verify conditions as outlined on the CSHID form have not changed. The supervisor will then sign the form just prior to the workers entering the non-permit space. The supervisor shall keep each CSHID form they sign within the applicable work package.

- Installation of the NERS Davit System shall be supervised by a fall protection Qualified Person (course #350435). Use of the NERS Davit System shall be supervised by a fall protection Competent Person (course #350432).

- When evaluating a confined space, the CSHID should have at a minimum the following and represent the space in a static condition:

  – CSHID number (found on inventory)
  – Is the space posted or list special tool/equipment needed to open space
  – 200E or 200W
  – Farm or nearest building
  – Tank number
  – Pit or riser number
  – Document each access point into the space if more than once exists
  – Dimensions of the space
  – Reference to IHEA if applicable
  – Each potential hazard when space is in static condition (Section 4)
  – Ventilation source if present when in static condition
  – What the space is used for
  – Complete Section 3 of the CSHID
  – Any rescue plan if applicable
  – Determine space classification (permit or non-permit)

- If CSHID determines space is PRCS, line through Section 5, initial and date the line to prevent Section 5 from being used.

- See Figure 1 for flow chart representing CSHID and Permitting process.

3.3 Atmospheric Hazard Determination

Any confined spaces with an open path to a tank farm headspace with or without engineered ventilation shall be considered as having a "hazardous atmosphere" unless an Industrial Hygiene Exposure Assessment as outlined below is conducted. All exposure assessments required throughout this document shall conform to TFC-ESHQ-IH-C-69.

When the only remaining hazard within a confined space is atmospheric (all other hazards have been eliminated), the alternate entry method should be used.

With regard to atmospheric concentrations of any substance, the most conservative determination will be implemented irrelevant of any respiratory protection being used.

- To evaluate potential for "hazardous atmosphere" as it pertains to permit required confined spaces, WRPS-IH will use the following criteria to determine whether a permit Required Confined Space "hazardous atmosphere" is present:

  - Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL).

  - Airborne combustible dust at a concentration that meets or exceeds its LFL.

  - Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent.

  - Atmospheric concentration of any substance that meets or exceeds PAC-2 (60 min) levels by measurement, calculation, and quantitative exposure assessment.

    - Substances not having a PAC-2 (60 min) with predicted concentrations exceeding five (5) times the occupational exposure limit as an 8-hour time weighted average (OEL 8HR TWA), shall be evaluated by IH via and IHEA to determine if the substance, at the predicted concentration, represents an acute health affect that could prevent self-rescue (escape unaided).

3.4 Identification

- The confined space ID number will be generated and maintained on the centralized confined space inventory. The facility manager and confined space SME shall determine the numbering system for each specific facility location. The use of equipment identification numbers (EIN) should be considered to ensure CSHID numbers line up with drawings, procedures, round sheets and piping diagrams as defined by TFC-ENG-STD-12.

- All mobile office crawl spaces will be assigned CSHID numbers of the mobile office number (e.g., MO-283). If the mobile office has more than one confined space, each

space will receive a number designation (e.g., MO-283-1). All mobile office CSHID numbers will be assigned by the Confined Space Safety SME.

- Temporary confined spaces created because of a modification, construction, or maintenance activity will be assigned a unique identifier (e.g., A-101 Temp-1). The Confined Space Safety SME shall be contacted to request a temporary CSHID number.

3.5 Procedure

DOE-0360, "Hanford Site Confined Space Procedure," is available on the Procedures website under "endorsed documents."

3.6 Records

The following records are discussed in this standard:

- Hanford Confined Space Hazard Identification Form (A-6005-724)
- Hanford Confined Space Entry Permit Form (A-6005-717)
- Hanford Confined Space Entry Log Form (A-6005-719)
- Hanford PRCS Entry Notification – Hanford Fire Department Form (A-6005-718)
- MOPs documenting annual Confined Space Permits reviews
- IH DRI Monitoring Field Log Form (A-6003-860)
- WRPS Attendance Roster Form (A-6003-211)
- WRPS Qualified Person – Fall Protection (course #350435)
- WRPS Competent Person – Fall Protection (course #350432)
- WRPS Competent Person – Confined Space (course #354043)
- WRPS Qualified Person – Confined Space (course #354044)
- WRPS Confined Space Rescue Equipment Training (course #350675).

All non-training documents referenced herein are processed into IDMS through the work package in accordance with TFC-OPS-MAINT-C-01.

The record custodian identified in the Company Level Records Inventory and Disposition Schedule (RIDS) is responsible for record retention in accordance with TFC-BSM-IRM_DC-C-02.

4.0 DEFINITIONS

Terminology used in this standard is defined in DOE-0360, Appendix A.

5.0 SOURCES

5.1 Requirements

5.1.1 DOE-0360, "Hanford Site Confined Space Procedure."

5.2 References

5.2.1 TF-OPS-IHT-007, "Using Direct Reading Instruments."

5.2.2 TFC-BSM-IRM_DC-C-02, "Records Management."

5.2.3 TFC-ENG-STD-12, "Tank Farm Equipment Identification Numbering and Labeling Standard."

5.2.4 TFC-ESHQ-IH-C-46, "Industrial Hygiene Reporting and Records Management."

5.2.5 TFC-ESHQ-IH-C-69, "Industrial Hygiene Exposure Assessment."

5.2.6 TFC-OPS-MAINT-C-01, "Tank Operations Contractor Work Control."

Figure 1. Confined Space Flow Chart.